

In the Claims

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1. (Currently Amended) An electromagnetic transponder including a parallel oscillating circuit adapted to being excited by a series oscillating circuit of a read/write terminal when the electromagnetic transponder enters an electromagnetic field of the read/write terminal, wherein components of the parallel oscillating circuit of the electromagnetic transponder are sized so that ~~a coupling coefficient between respective oscillating circuits of the terminal and of the electromagnetic transponder rapidly decreases when a distance separating the electromagnetic transponder from the terminal becomes smaller than a predetermined value~~ a distance at which a voltage across the oscillating circuit of the transponder is maximum is greater than a distance at which a coupling coefficient between the oscillating circuit of the transponder and the oscillating circuit of the terminal is maximum.

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2. (Currently Amended) The electromagnetic transponder of claim 1, wherein ~~said predetermined value is~~ the components of the parallel oscillating circuit of the electromagnetic transponder are sized such that the electromagnetic transponder operates at a distance of 5 cm or greater from the read/write terminal.

3. (Currently Amended) The electromagnetic transponder of claim 1, wherein ~~an inductance of the parallel oscillating circuit is configured to have a minimal inductance is~~ minimized.

4. (Previously Presented) The electromagnetic transponder of claim 1, wherein an inductance of the parallel oscillating circuit is chosen in accordance with the following relation:

$$k_{opt} = \sqrt{\frac{R_1 L_2}{R_2 L_1}},$$

where  $k_{opt}$  represents the coupling coefficient providing a maximum voltage across the parallel oscillating circuit, where  $R_1$  represents a series resistance of the series oscillating circuit, where  $R_2$  represents an equivalent resistance of the transponder brought in parallel on inductance  $L_2$ , and where  $L_1$  represents an inductance of the series oscillating circuit.

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5. (Currently Amended) The electromagnetic transponder of claim 1, having a parallel oscillating circuit wherein components are sized based on an operating point at a median distance of a desired operating range, chosen to correspond to a coupling coefficient as close as possible to an optimal coupling coefficient in accordance with the following relation:

$$V_{2\max(kopt)} = \sqrt{\frac{R_2}{R_1}} \frac{V_g}{2},$$

where  $V_{2\max(kopt)}$  is a voltage across the parallel oscillating circuit for optimal coupling between the oscillating circuits,  $R_1$  is a series resistance of the series oscillating circuit,  $R_2$  is an equivalent resistance of the transponder brought in parallel on its oscillating circuit, and  $V_g$  is an excitation voltage of the series oscillating circuit.

6. (Previously Presented) The electromagnetic transponder of claim 1, wherein a number of turns of an inductance of the parallel oscillating circuit is smaller than 3.

7. (Previously Presented) The electromagnetic transponder of claim 1, wherein respective values of a capacitance and of an inductance of the parallel oscillating circuit range is between 20 and 500 pf and between 0.1 and 10  $\mu$ H.

8. (Currently Amended) A terminal for generating an electromagnetic field adapted to cooperate with at least one transponder when said at least one transponder enters the electromagnetic field, including a series oscillating circuit for generating the electromagnetic field, the series oscillating circuit being sized so that ~~a coupling coefficient between respective oscillating circuits of the terminal and of the electromagnetic transponder rapidly decreases when a distance separating the electromagnetic transponder from the terminal becomes smaller than a predetermined value~~ a distance at which a voltage across an oscillating circuit of the transponder is maximum is greater than a distance at which a coupling coefficient between the oscillating circuit of the transponder and the series oscillating circuit of the terminal is maximum.

9. (Previously Presented) The terminal of claim 8, wherein components of the series oscillating circuit are sized to fulfill operating conditions of the transponder of claim 1.

10. (Previously Presented) The terminal of claim 9, wherein an inductance of the series oscillating circuit includes between 3 and 15 turns.

11. (Original) A system of contactless electromagnetic transmission between a terminal and a transponder, wherein the transponder is that of claim 1.

12. (Original) A system of contactless electromagnetic transmission between a terminal and a transponder, wherein the terminal is that of claim 8.

13. (Currently Amended) A system for contactless electromagnetic transmission between a terminal and a transponder, comprising:

the terminal having a first oscillating circuit including a first resistor, a first capacitor and a first inductor; and

the transponder having a second oscillating circuit including a second resistor, a second capacitor and a second inductor;

wherein at least one of the terminal and the transponder is structurally dedicated to operation ~~in a relation~~ where a distance between the terminal and the transponder exceeds a predetermined distance.

14. (Previously Presented) The system of claim 13, wherein the second capacitor is an integrated capacitor.

15. (Currently Amended) The system of claim 14, wherein the second inductance is configured to have a minimal inductance minimized.

16. (Currently Amended) The system of claim 13, wherein the first resistor, the first capacitor and the first inductor are sized so that a distance at which a voltage across the second oscillating circuit is maximum is greater than a distance at which a coupling coefficient between the first and second oscillating circuits is maximum ~~a coupling coefficient between the first oscillating circuit and the second oscillating circuit rapidly decreases when the distance between the transponder and the terminal becomes smaller than the predetermined distance, such that the~~

~~terminal is structurally dedicated to operation in the relation where the distance between the terminal and the transponder exceeds the predetermined distance.~~

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17. (Currently Amended) The system of claim 13, wherein the second resistor, the second capacitor and the second inductor are sized so that a distance at which a voltage across the second oscillating circuit is maximum is greater than a distance at which a coupling coefficient between the first and second oscillating circuits is maximum ~~a coupling coefficient between the first oscillating circuit and the second oscillating circuit rapidly decreases when the distance between the transponder and the terminal becomes smaller than the predetermined distance, such that the transponder is structurally dedicated to operation in the relation where the distance between the terminal and the transponder exceeds the predetermined distance.~~

18. (Previously Presented) The system of claim 13 wherein the first resistor, the first capacitor and the first inductor are connected in series with one another, and wherein the second resistor, the second capacitor and the second inductor are connected in parallel with one another.

19. (Previously Presented) The system of claim 13, wherein the first inductor includes between 3 and 15 turns.

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